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National Priority Chemicals Trends Report (2000-2004)

Section 2
Progress Made Toward OSW's GPRA Goals for Priority Chemicals

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OSW's Goals to Reduce PCs in Wastes

The 1993 Government Performance and Results Act (GPRA) requires the Agency to publish a five-year strategic plan with goals, and update them every three years. EPA has recently revised its goal and, in this section, we will explain the previous 2008 goal, which we continue to track, and our new 2011 goal.

In this section, we discuss progress made toward the 2008 GPRA goal, which uses TRI data that lag more than a year and are greatly influenced by market forces. OSW recently established a new goal, referred to as the 2011 GPRA goal. This goal uses current data from facility partners who agree to reduce their PC wastes, so it better reflects our own waste minimization program efforts. In next year's Report we will begin reporting progress made toward each of these goals.

OSW will continue to use TRI data to track long-term PC trends and to look for waste minimization opportunities in industry sectors.

The OSW 2008 GPRA Goal

In 2004, OSW established a goal of a 10 percent reduction of PCs by 2008, using a 2001 baseline. Although this goal has been superseded for strategic planning purposes by our 2011 goal (discussed later in this section), we are continuing to track progress toward its fulfillment as promised in the President's Budget for FY 2004. This section discusses progress since 2001 toward OSW's 2008 GPRA goal. Although 24 of the 31 PCs are reported to TRI, only 23 PCs are tracked for the 2008 GPRA goal. Polychlorinated biphenyls (PCBs) also are reported to TRI, but were being tracked separately at the time the 2008 goal was developed. As such, we do not track PCBs for the 2008 GPRA goal.

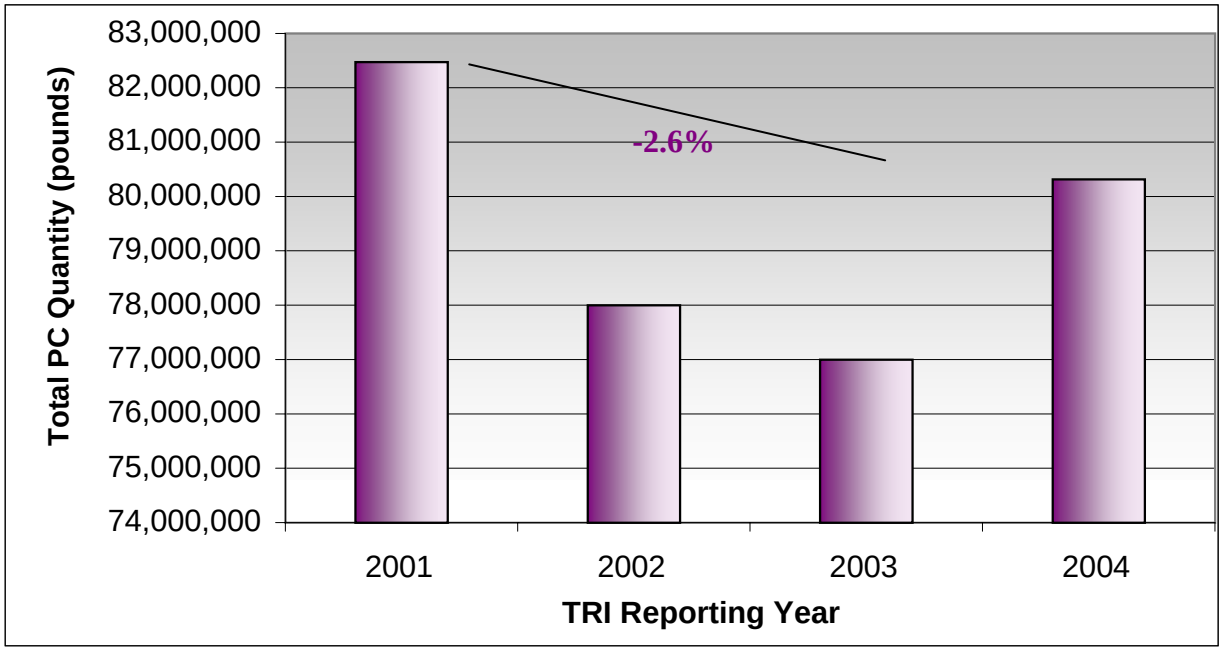
In Exhibit 2.2 we show the aggregated quantity and percentage reduction of the 23 PCs since 2001. As of 2004, there was a 2.6 percent reduction in the total quantity of PCs contained in wastes, compared to the quantities generated in 2001. While OSW's reduction work probably contributed to the decrease, we cannot identify the share of our contributions.

Exhibit 2.1. National Progress toward the 2001−2004 Goal to Reduce Priority Chemicals by 10 Percent

Reporting Year	2001 (pounds)	2002 (pounds)	2003 (pounds)	2004 (pounds)
Total PC quantity	82,462,188	78,012,732	76,976,265	81,468,266 *
Percent change from baseline year (2001)	Baseline Year	-5.4%	-6.7%	-2.6%

* To provide consistent and accurate goal progress measurement, we adjusted (decreased) the reported 2004 TRI quantities to reflect the effect of: 1) new equipment installed at a Louisiana facility that substantially improved this facility's ability to detect PCs in waste streams compared to previous measurements, and 2) revised quantities for several PCs reported by a Texas facility that resulted in a substantial increase of about 1.2 million pounds.

Exhibit 2.2. National Progress Towards the 2003−2008 Goal to Reduce Priority Chemicals by 10 Percent



Progress by Chemical

Exhibit 2.3 shows the quantity and the percent reduction for each of the 23 PCs for 2001−2004.

Exhibit 2.3. National Quantities of Priority Chemicals, 2001−2004

Chemical Name	Reporting Year				Change in Quantity (2001−2004)	Percent Change (2001-2004)	Percent of Total PC Quantity (2004)
	2001 (pounds)	2002 (pounds)	2003 (pounds)	2004 (pounds)			
Lead and lead compounds	36,139,492	34,098,442	35,069,921	31,967,610	-4,171,882	-11.5%	39.2%
Naphthalene	9,994,513	11,028,479	10,294,471	15,436,139	5,441,626	54.4%	18.9%
Polycyclic aromatic compounds	14,082,123	12,775,052	12,655,240	12,583,053	-1,499,070	-10.6%	15.4%
Hexachloro-1,3-butadiene	6,404,741	5,167,385	5,566,299	6,697,226	292,485	4.6%	8.2%
Hexachlorobenzene	5,765,382	4,208,705	4,270,659	4,514,273	-1,251,109	-21.7%	5.5%
Hexachloroethane	4,145,249	4,056,497	2,694,131	2,576,385	-1,568,864	-37.8%	3.2%
Phenanthrene	236,240	2,309,338	1,817,805	2,376,603	2,140,363	906.0%	2.9%
1,2,4-Trichlorobenzene	2,144,696	1,527,029	1,674,802	1,888,685	-256,011	-11.9%	2.3%
Cadmium and cadmium compounds	932,493	746,474	824,080	885,122	-47,372	-5.1%	1.1%
Pentachlorobenzene	487,719	311,145	484,733	608,691	120,972	24.8%	0.7%
Anthracene	360,837	345,499	419,243	520,669	159,832	44.3%	0.6%
Pendimethalin	200,195	421,827	429,551	475,695	275,500	137.6%	0.6%
Benzo(g,h,i)perylene	990,522	310,885	317,817	374,449	-616,074	-62.2%	0.5%
Quintozene	215,122	205,107	235,816	280,987	65,865	30.6%	0.3%
Pentachlorophenol	54,339	36,856	28,295	117,264	62,925	115.8%	0.1%
Trifluralin	92,863	62,544	57,392	81,668	-11,195	-12.1%	0.1%
Mercury and mercury compounds	127,526	93,888	36,732	51,697	-75,830	-59.5%	0.1%
Dibenzofuran	66,726	288,926	75,605	24,942	-41,784	-62.6%	0.0%
2,4,5-Trichlorophenol	20,657	17,913	22,857	5,083	-15,574	-75.4%	0.0%
Heptachlor	0	14	54	775	775	NA	0.0%
Methoxychlor	1	1	0	766	765	95650.0%	0.0%

Exhibit 2.3. National Quantities of Priority Chemicals, 2001−2004

Chemical Name	Reporting Year				Change in Quantity (2001−2004)	Percent Change (2001-2004)	Percent of Total PC Quantity (2004)
	2001 (pounds)	2002 (pounds)	2003 (pounds)	2004 (pounds)			
Dioxin and dioxin-like compounds	706	543	692	484	-221	-31.4%	0.0%
Lindane	46	183	71	0	-46	-100.0%	0.0%
Total	**82,462,188**	**78,012,732**	**76,976,265**	**81,468,266**	**-993,922**	**-1.2%**	**100.0%**

*To provide consistent and accurate goal progress measurement, we adjusted (decreased) the reported 2004 TRI quantities to reflect the effect of: 1) new equipment installed at a Louisiana facility that substantially improved this facility's ability to detect PCs in waste streams compared to previous measurements, and 2) revised quantities for several PCs reported by a Texas facility that resulted in a substantial increase of about 1.2 million pounds.

In 2004, three chemicals accounted for about 74 percent of the total quantity of PCs: lead and lead compounds (39.2%), naphthalene (18.9%), and polycyclic aromatic compounds (15.4%).

Overall, since 2001, the quantities for 13 of the 23 PCs decreased. The PCs with the largest decreases from 2001−2004 are illustrated in Exhibits 2.4 and 2.5. The PCs with the largest increases from 2001−2004 are illustrated in Exhibits 2.6 and 2.7.

Exhibit 2.4. Top 5 Priority Chemicals with the Largest Quantity Decreases, 2001−2004

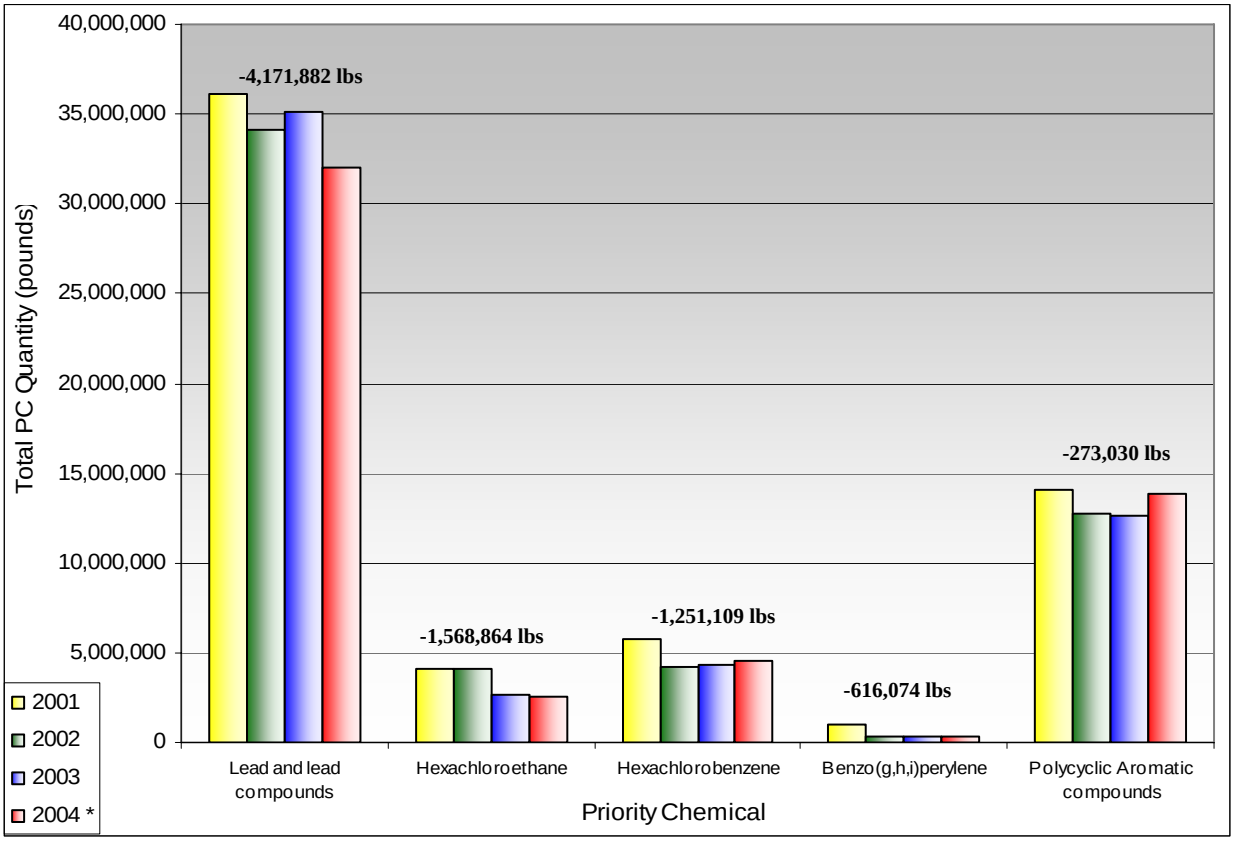


Exhibit 2.5. Top 4 Priority Chemicals with the Largest Percentage Decreases, 2001−2004

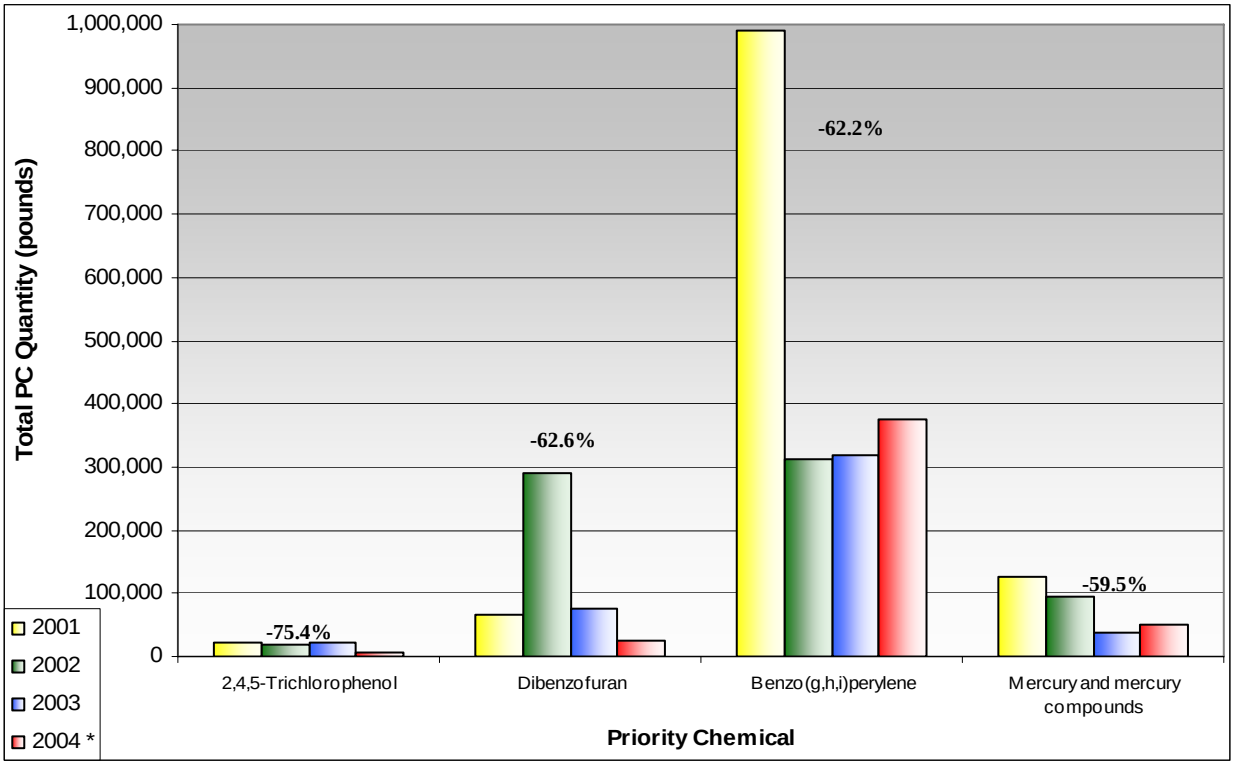


Exhibit 2.6. Top 4 Priority Chemicals with the Largest Quantity Increases, 2001−2004

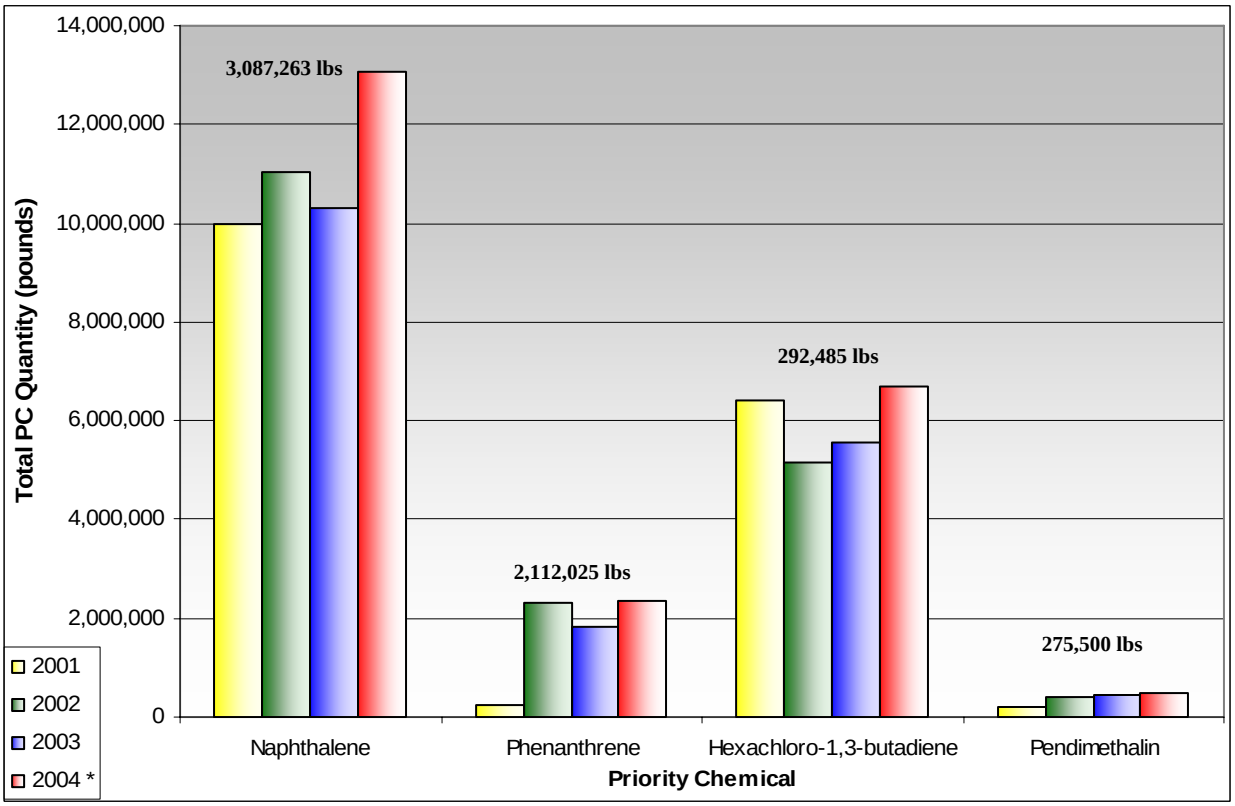
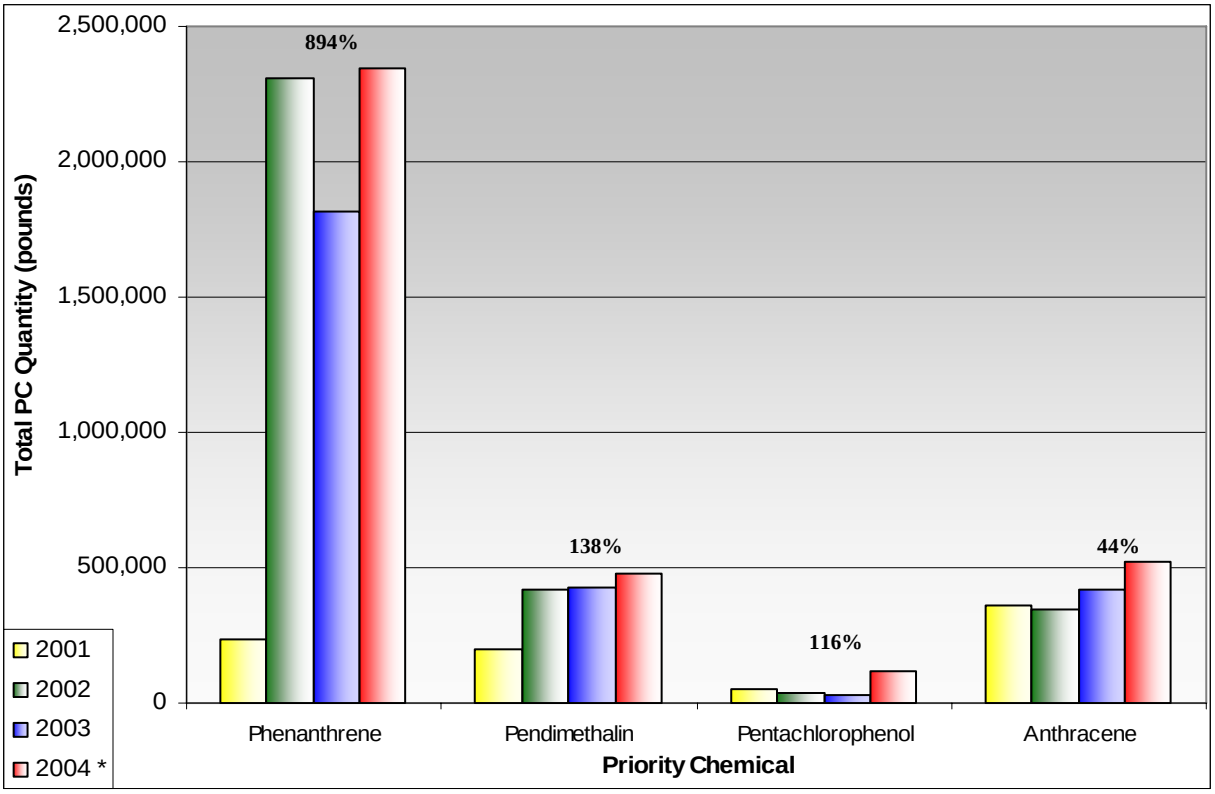


Exhibit 2.7. Top 4 Priority Chemicals with the Largest Percentage Increases, 2001−2004



Progress by Industry Sector

Ten industry sectors, as shown in Exhibit 2.8, accounted for about 75 percent of the total quantity of PCs. From 2001 to 2004, eight of these 10 industry sectors realized significant increases in the quantities of PCs; the largest increases were in four of the industry sectors (Industrial organic chemicals nec, Petroleum refining, Blast furnaces and steel mills, and Cyclic crudes and intermediates) showing increases ranging from 1.3 million to 8.5 million pounds. Conversely, facilities in the Alkalies and chlorine industry sector saw a significant decrease of about 11 million pounds.

Exhibit 2.8. Industry Sectors that Accounted for 75 Percent of the Total Quantity of Priority Chemicals in 2004

Primary SIC	SIC Description	Reporting Year				Percent Change in Quantity (2001−2004)	Percent of Total Quantity (2004)
		2001 (pounds)	2002 (pounds)	2003 (pounds)	2004 (pounds)		
2869	Industrial organic chemicals, nec	2,161,888	6,768,216	8,425,891	10,635,310	391.9%	13.1%
3341	Secondary nonferrous metals	9,720,459	11,947,394	13,102,215	10,228,347	5.2%	12.6%
3312	Blast furnaces and steel mills	7,941,343	7,190,794	8,220,522	9,912,236	24.8%	12.2%
2812	Alkalies and chlorine	18,975,349	12,511,960	7,456,586	8,226,457	-56.6%	10.1%
2911	Petroleum refining	2,234,759	4,199,145	3,408,834	5,827,455	160.8%	7.2%
2895	Carbon black	3,454,362	3,922,074	4,052,612	4,239,664	22.7%	5.2%
3624	Carbon and graphite products	5,119,620	1,834,267	2,891,018	3,762,327	-26.5%	4.6%
3334	Primary aluminum	2,197,740	1,849,101	2,845,044	2,974,060	35.3%	3.7%
2865	Cyclic crudes and intermediates	1,432,105	3,103,126	1,639,150	2,734,774	91.0%	3.4%
9711	National security	2,248,227	2,605,080	2,787,985	2,561,448	13.9%	3.1%

*To provide consistent and accurate goal progress measurement, we adjusted (decreased) the reported 2004 TRI quantities to reflect the effect of: 1) new equipment installed at a Louisiana facility that substantially improved this facility's ability to detect PCs in waste streams compared to previous measurements, and 2) revised quantities for several PCs reported by a Texas facility that resulted in a substantial increase of about 1.2 million pounds.

The New 2011 GPRA Goal for Reducing Priority Chemicals

EPA recently defined a new GPRA goal, referred to as the 2011 GPRA goal, for reducing the PCs. Unlike previous GPRA goals that used TRI data to measure progress toward reducing PCs, the new goal is directly keyed to reductions of PCs achieved by NPEP partners. This goal states that, *by 2011, 4 million pounds of PCs will be eliminated, as measured by NPEP achievements, Supplemental Environmental Projects (SEPs), and other tools used by EPA to achieve PC reductions*, with 2006 as the baseline year. In next year's *Report*, we also will begin reporting progress made toward achieving this new goal. In the future, we expect to work with industrial facilities to reduce the use of PCs in products, as well as in wastes.

Commitments and Progress to Reduce Priority Chemicals under the National Partnership for Environmental Priorities (NPEP)

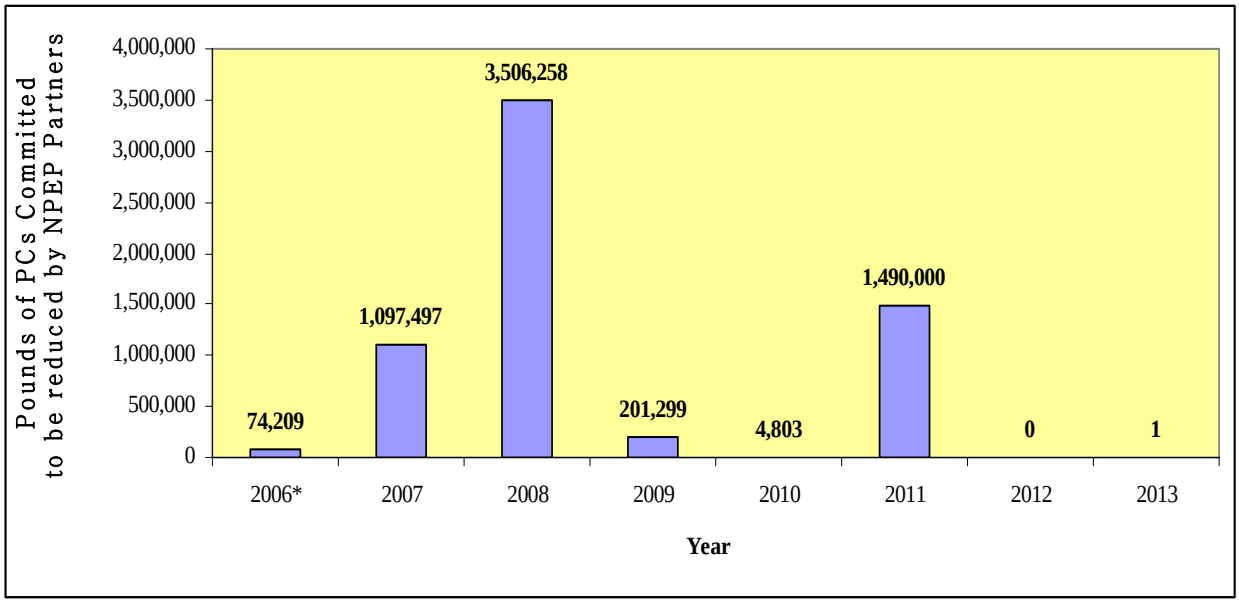
In September 2002, EPA launched the NPEP program as part of its Resource Conservation Challenge (RCC) (See discussion of the RCC in Section 1). As of September 2006, 100 NPEP partner facilities have committed to reduce approximately 8.5 million pounds of 17 PCs by December 2013 (Exhibit 2.9). Exhibit 2.10 shows the trend of commitments to reduce PCs from 2006−2013.

Exhibit 2.9. Priority Chemical Reductions Committed Under NPEP (Fiscal Years 2006−2013)

Chemical Name	FY 2006 (pounds)*	FY 2007 (pounds)	FY 2008 (pounds)	FY 2009 (pounds)	FY 2010 (pounds)	FY 2011 (pounds)	FY 2012 (pounds)	FY 2013 (pounds)	Total NPEP Reduction Commitments (FYs 2006−2013)	Percent of Total NPEP PC Reduction Commitments (FYs 2006−2013)
1,2,4-Trichlorobenzene	5,810	5,520	0	0	0	0	0	0	11,330	0.2%
Acenaphthene	180	0	0	0	0	0	0	0	180	0.0%
Anthracene	144	0	0	0	0	0	0	0	144	0.0%
Benzo(g,h,i)perylene	200	0	0	0	0	0	0	0	200	0.0%
Cadmium and cadmium compounds	0	150	7	200	38	0	0	0	395	0.0%
Dibenzofuran	0	0	87,652	0	0	0	0	0	87,652	1.4%
Dioxin and dioxin-like compounds	249	0	0	0	0	0	0	0	249	0.0%
Lead and lead compounds	64,935	970,976	1,103,885	178,417	95	1,490,000	0	0	3,808,308	59.7%
Mercury and mercury compounds	30	3,901	6,293	0	4,670	0	0	1	14,895	0.2%
Naphthalene	387	110,600	1,558,421	0	0	0	0	0	1,669,408	26.2%
Polycyclic aromatic compounds	0	6,000	745,032	22,682	0	0	0	0	773,714	12.1%
Polychlorinated biphenyls	0	350	3,504	0	0	0	0	0	3,854	0.1%
Pendimethalin	0	0	584	0	0	0	0	0	584	0.0%
Phenanthrene	1,236	0	0	0	0	0	0	0	1,236	0.0%
Pyrene	1,038	0	0	0	0	0	0	0	1,038	0.0%
Trifluralin	0	0	880	0	0	0	0	0	880	0.0%
Total	**74,209**	**1,097,497**	**3,506,258**	**201,299**	**4,803**	**1,490,000**	**0**	**1**	**6,374,067**	**100.0%**

***Note:** The first column reflects pounds committed for reduction during FY 2006 but not yet achieved.

Exhibit 2.10. Priority Chemical Quantities Committed for Reduction, FYs 2006–2013



* Quantities are for the federal fiscal year of October 1 through September 30 of the following year. For example, commitments to reduce the PC quantities shown for 2006 were made between October 1, 2005 and September 30, 2006.

Exhibit 2.11 shows the reduction in quantity of each PC that NPEP partners have achieved from 2004 to 2006. Since 2004, NPEP partners have eliminated about 2.1 million pounds of PCs of which lead accounted for 93 percent of the total quantity reduced.

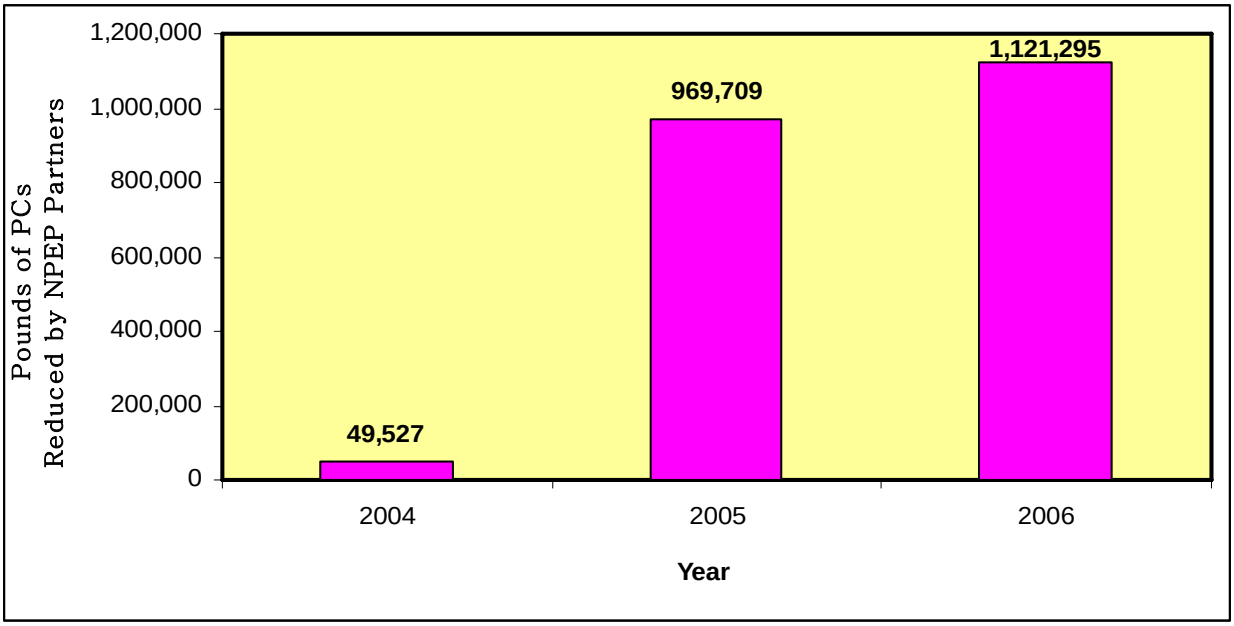
Exhibit 2.11. Priority Chemical Reductions Achieved Under NPEP

Chemical Name	FY 2004 (pounds)	FY 2005 (pounds)	FY 2006 (pounds)	Total NPEP Actual Achievements (FYs 2004–2006) (pounds)	% of Total NPEP PC Quantities Achieved (FYs 2004–2006)
1,2,4-Trichlorobenzene	0	0	0	0	0.0%
Acenaphthene	0	0	0	0	0.0%
Anthracene	0	0	0	0	0.0%
Benzo(g,h,i)perylene	0	0	0	0	0.0%
Cadmium and cadmium compounds	0	0	0	0	0.0%
Dibenzofuran	0	0	0	0	0.0%
Dioxin and dioxin-like compounds	0	0	144	144	0.0%
Lead and lead compounds	49,527	852,267	1,090,098	1,991,892	93.1%
Mercury and mercury compounds	0	4,378	26,718	31,096	1.5%
Naphthalene	0	103,746	0	103,746	4.8%
Polycyclic aromatic compounds	0	9,318	0	9,318	0.4%
Polychlorinated biphenyls	0	0	4,335	4,335	0.2%
Pendimethalin	0	0	0	0	0.0%
Phenanthrene	0	0	0	0	0.0%
Pyrene	0	0	0	0	0.0%
Trifluralin	0	0	0	0	0.0%
Total	**49,527**	**969,709**	**1,121,295**	**2,140,531**	**100.0%**

Note: Quantities are for the federal Fiscal Year (FY) of October 1 through September 30 of the following year. For example, commitments to reduce the PC quantities shown for 2006 were made between October 1, 2005 and September 30, 2006.

Exhibit 2.12 shows the trend of NPEP partner PC reductions achieved from FYs 2004–2006.-

Exhibit 2.12. Priority Chemical Quantities Achieved, FYs 2004−2006



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